

# This sporting life

## Football position and atopy—both subject to the birth order effect?

Michael R Perkin

In 1989 Strachan published a paper observing that the prevalence of hay fever varied with family size.<sup>1</sup> He proposed that allergic diseases may be prevented by infection in early childhood, transmitted by unhygienic contact with older siblings. This protection from atopy is also related to order of birth; younger siblings are less likely to be atopic.<sup>2</sup> To explain this observation Strachan suggested that scientists should be seeking other influences of development, lifestyle, or environment that vary strongly with birth order.<sup>2</sup>

With this in mind, I (the author), as the father of three young boys, was concerned that, when it came to playing football, the youngest was always going to be nominated the goalkeeper and the eldest the striker. This led to my primary hypothesis that perhaps not only atopy varied with birth order but also football position, with goalkeepers being more likely to be the youngest in the family and forwards the eldest (fig 1). The secondary, politically incorrect hypothesis, was that perhaps it was birth order among male siblings that was the deciding factor.

### Participants, methods, and results

A questionnaire went to all premiership clubs, explaining the underlying hypothesis and asking each player about the number of younger and older siblings and their sex. The stresses of playing in the premiership were clearly too great because only three of the 20



**Fig 2** David Seaman (goalkeeper) matches the family size observation (one brother)

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BMJ 2003;327:1473-4



**Fig 1** Pele (inside left forward, now called striker) fits the birth order hypothesis (eldest of three children)

teams replied. Two refused to participate, and one (Middlesbrough) said it would ask its players, but I heard nothing further. Intriguingly, one of the refusers (Sunderland) wrote that "Due to the volume of requests we get on a daily basis similar to yours we are not able to help on this occasion." Changing tactics, I wrote to all 24 clubs in Nationwide Division Three. Fourteen clubs replied, supplying sibling details of 232 players (23 goalkeepers, 72 defenders, 68 midfielders, and 69 forwards).

The mean family size varied significantly by football position (mean number of siblings of goalkeeper 1.13 (95% confidence interval 0.78 to 1.48), defender 1.79 (1.47 to 2.11), midfield 2.40 (1.95 to 2.84), forward 2.00 (1.53 to 2.47)). One explanation for goalkeepers being from smaller families may be that in such families individual children spend longer in goal, whereas children in bigger families can rotate through other positions (fig 2).

Overall 68 players were eldest children, 54 middle siblings, and 110 youngest children. For the statistical analysis I treated each position in turn as a dichotomous outcome (for example, goalkeeper or any other position) in a logistic model with family position (eldest, middle, or youngest sibling) included as the dependent variable. I used being the youngest sibling

Logistic analysis of football position and birth position (all siblings and male siblings only), adjusted for family size

	Odds ratio* for being eldest (all siblings)	95% confidence interval	Odds ratio* for being eldest male sibling (male siblings only)	95% confidence interval
Goalkeeper	0.61	0.19 to 2.01	0.76	0.39 to 2.91
Defender	1.03	0.52 to 2.03	1.77	0.83 to 3.80
Midfield	1.54	0.75 to 3.15	1.00	0.45 to 2.22
Forward	0.76	0.37 to 1.59	0.60	0.27 to 1.33†

\*Control group is youngest sibling (odds ratio 1.0).

†P=0.21.

as the baseline group (odds ratio 1.0) as this was the most prevalent family position among the football players. I adjusted family position for family size. Twelve players were only children and were excluded from the "all siblings" analysis. For the analysis that was restricted to birth order of male siblings only, I excluded 82 football players who were only children.

No trend became obvious with goalkeepers, defenders, and midfield players (table). There was an indication that forwards were less likely to be eldest siblings, which was stronger among male siblings only,

but the relationship, to use football parlance, missed statistical significance by some way.

## Comment

The results tend towards the opposite of the primary hypothesis in that forwards were less likely, not more likely, to be eldest siblings. In contrast, perhaps the secondary hypothesis, that birth order among siblings decides football position, has some foundation in that the relation seemed stronger when male siblings alone were considered. Overall, with broad confidence intervals, it seems safe to conclude that male siblings should not be dissuaded from adopting any football position that appeals to them.

Contributors: MRP is the sole author.

Competing interests: None declared.

Ethical approval: Not required.

- 1 Strachan DP. Hay fever, hygiene, and household size. *BMJ* 1989; 299:1259-60.
- 2 Strachan DP. Family size, infection and atopy: the first decade of the "hygiene hypothesis." *Thorax* 2000;55(suppl 1):S2-10.

## Referee's half-time analysis

The Valley  
Ian Forgacs  
season ticket holder,  
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(full time: 38  
nailbiting sessions a  
season)

Honest, I was over the moon when asked to review this paper for the *BMJ*. Of course, I had to ask the boss if it was OK to review it (but she said it was alright). I dunno quite how I managed to do the review—it sort of just hit my head, Brian, and found the back of the net. I was dead gutted to find out I was only getting fifty quid for what was an hour's work. Me agent said I shouldn't get out of bed for less than eighty thousand quid a week. But wot I thought was ... it's not often a player gets to be a referee and hold up a yellow or red card and get all lippy, so why not, I says.

So wot's in this then, I says. This geezer from south west London (probably a dodgy Wimbledon fan) comes up with this nutty idea that if you're little then you're the goalie. Well all the goalies I've ever seen is about seven foot six. Still I guess they was small once. Mind you strikers are pretty big as well—that is, unless you're Tony Cottee, who must be the most vertically challenged player ever to play for Everton—and look what happened to them. Mind you they now got big Duncan Ferguson and that hunky Wayne Rooney (would not like to meet them on a dark night ... least they don't play for Leeds, know wot I mean).

Still, this geezer has got the number of teams in the Premiership dead wrong. Maths ain't my long suit, but there is 20 not 22 teams in the Premiership (my dad told me they cut from 22 to 20 after season 1994-5). Makes me wonder when he sent in his questionnaire—bet it was 2002-3 tho', 'cos Sunderland ain't what you call yer actual Premiership material. Anyway, not surprised yer lads from the King's Road didn't answer—they get a new team every week with that

Russkie geezer's zillions. He don't care how many brothers and sisters they got.

Not fair to kick a team (Sunderland) when it's down. No respect for the dead this bloke (tho' I must say I wouldn't mind aiming a kick at that Peter Reid before he got the old heave-ho. Right bastard he was).

Not fair to name and shame Middlesbrough. Doubt their lot know wot a sibling is, and even if they do, doubt they could count 'em up or know which sex they was. By the way, shouldn't mention sex to a footballer—especially not on the night before a game.

Dragging the bottom of the barrel a bit, ain't it, to go for Div 3 of the Nationwide. I mean the educated feet of yer Vieras and yer van Nistelrooys wouldn't have heard of yer provincial towns like yer Oxford and yer Cambridge. Still, just over half replied—not bad considering they ain't so literate and numerate in Div 3, unlike wot I am.

Wot I don't get is that the geezer wot's writing all this says his results show forwards are likely to be the youngest—yet it ain't significant. Well, I ask you. Wot is the poor old reader of the *BMJ* (Britain's newest and liveliest football mag) going to make of all this? He's got this theory the forwards are elder ... they turn out to be younger ... but it ain't significant. Ouch, me brain hurts, Brian.

The geezer's got it wrong. Where kids wanna play today is on midfield. Look at yer actual Real Madrid with that Zidane geezer and Becks. Who wants to be a striker when you can be a superstar from the middle of the park.

## Referee's commentary: it's all over

I think that the paper is entertaining (though as someone who is bored rigid by football in a family obsessed

with the sport, my heart sank when it arrived—one attraction of work is to get away from it!).

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